

INTERNATIONAL SEARCH REPORT

Internat. Appl. No.

PCT/US 99/21651

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04Q7/38 H04Q7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 673 259 A (QUICK JR ROY F) 30 September 1997 (1997-09-30) column 3, line 59 -column 4, line 62 column 7, line 22 - line 27 column 8, line 21 -column 10, line 9 column 10, line 54 - line 67 column 11, line 60 -column 13, line 32 column 14, line 13 - line 47 column 15, line 8 -column 17, line 21 column 18, line 41 -column 22, line 20 ---	1,21,27
A	US 5 802 465 A (HAMALAINEN JARI ET AL) 1 September 1998 (1998-09-01) column 2, line 59 -column 3, line 8 column 5, line 1 - line 34 column 6, line 15 -column 9, line 13 column 11, line 9 - line 59 --- -/--	1,21,27

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

7 January 2000

Date of mailing of the international search report

24/01/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040; Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Gerling, J.C.J.

INTERNATIONAL SEARCH REPORT

Internal Application No

PCT/US 99/21651

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 765 096 A (NIPPON TELEGRAPH & TELEPHONE) 26 March 1997 (1997-03-26) column 2, line 21 - line 40 column 5, line 55 -column 6, line 17 column 7, line 26 - line 39 column 15, line 33 -column 16, line 4 ----	1,27,28
A	US 5 544 196 A (TIEDEMANN JR EDWARD G ET AL) 6 August 1996 (1996-08-06) column 4, line 5 - line 44 column 5, line 14 - line 36 column 7, line 16 -column 8, line 15 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat'l Application No

PCT/US 99/21651

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5673259 A	30-09-1997	AU 701485 B	28-01-1999
		AU 5859596 A	29-11-1996
		BR 9608353 A	28-07-1998
		CA 2221213 A	21-11-1996
		EP 0827674 A	11-03-1998
		FI 974215 A	16-01-1998
		JP 11505392 T	18-05-1999
		WO 9637079 A	21-11-1996
US 5802465 A	01-09-1998	FI 933894 A	07-03-1995
		EP 0642283 A	08-03-1995
		JP 7170579 A	04-07-1995
EP 0765096 A	26-03-1997	JP 9093646 A	04-04-1997
		CN 1159110 A	10-09-1997
		JP 2912884 B	28-06-1999
		JP 9233051 A	05-09-1997
US 5544196 A	06-08-1996	AU 677578 B	01-05-1997
		BG 62022 B	30-12-1998
		BG 99024 A	30-11-1995
		BR 9306032 A	18-11-1997
		CA 2130667 A	06-09-1993
		CN 1077069 A	06-10-1993
		EP 0629325 A	21-12-1994
		FI 944055 A	02-09-1994
		HU 71651 A, B	29-01-1996
		IL 104910 A	23-07-1996
		JP 7504552 T	18-05-1995
		MX 9301230 A	29-04-1994
		SK 105494 A	10-05-1995
		WO 9318601 A	16-09-1993
		ZA 9301077 A	04-01-1994